

selected customer meters with AMR devices.¹ The classes of meters which will be equipped include:

"High cost to read" routes, requiring meter readers to drive long distances,²

"Chronic inaccessible" meters, where repeated visits by meter readers are required to obtain readings,

"High risk" areas, in which the safety of meter readers may be compromised.

SCG requests that alternative spectrum be examined and, if possible, allocated for wind profiler use.

THE PROPOSED FREQUENCY ALLOCATIONS
MAY CREATE DAMAGE TO OTHER RADIO SERVICES
IN AN ALREADY CROWDED FREQUENCY BAND

4. The instant Docket proposes allocations for the wind profiler radar system at 449 and possibly 915 MHz⁴. SCG has no direct corporate interest in the 449 MHz allocation⁵. SCG, however, has a direct and continuing interest in the 902-928 MHz frequency band, which is a potential venue for its future AMR/OMR operations.

5. SCG notes the presently crowded occupancy of the 902-928 MHz frequency band⁶. Presently the band is allocated on a primary basis for Government Radiolocation, on a secondary basis to the Amateur Radio service, and on other bases to Automatic Vehicle Monitoring⁷ systems, Industrial Scientific and Medical equipment, and unlicensed Part 15 intentional

⁴ Docket at #1

⁵ SCG, however, does have an indirect interest in this spectrum. #2.106 of the Commission's Rules indicates that this spectrum is allocated to the Government Radiolocation Service on a primary basis, and the Amateur Radio Service on a secondary basis. SCG maintains Amateur Radio stations as a "backup" capability for its Office of Emergency Preparedness. Some SCG Amateur stations operate in the 448-450 MHz spectrum. While carrying emergency/disaster communications, these stations could be affected by co-spectrum wind profiler radar emissions. The SCG service territory extends across most of the southern half of the state of California, including rural areas which are likely venues for the wind profiler radars; vide infra.

⁶ Docket at #15

⁷ "Automatic Vehicle Location" is probably a better descriptor for this kind of activity.

radiators. Additionally the Commission has released an NPRM⁸ which would create a new Location and Monitoring Service, presumably to enlarge and normalize the present Automatic Vehicle Monitoring activities⁹.

6. SCG also notes that all dockets involving the 902-928 MHz frequency band include as a possible alternative, the restriction and/or removal of Part 15 operations from this band. Such limitations would obviously include AMR/OMR devices, which are of direct interest to SCG. Unfortunately no spectrum has yet been made available for relocation of AMR/OMR devices¹⁰. Thus no migration path for this radio-based activity has been presented; SCG vigorously maintains that it and other public utilities¹¹ across the nation must retain unhindered access to the frequency band.

7. SCG also notes the existence and use of uncounted numbers of (non AMR/OMR) Part 15 devices on the 902-928 MHz band. In terms of their numbers, these devices form a powerful presence on the band. It would seem, to SCG, that the Commission would have considerable difficulty in "regulating" existing users of these devices off the frequency band, given that users

⁸ PR Docket 93-61

⁹ The nearly simultaneous release of the instant NPRM and ET Docket 93-61, both proposing additional uses for the same frequency band, would seem to indicate to SCG some lack of coordination within the Commission in its spectrum management function.

¹⁰ Department of Energy Docket No. CE-NOI-93-001 has envisioned the creation of a separate frequency band for AMR/OMR and similar devices, from spectrum currently held by the Federal government. On March 2, 1993, SCG filed Comments in favor of the allocation of such AMR/OMR-identified spectrum. The availability for service of such alternate spectrum, however, is very far from certain at this time. The 902-928 MHz band will be fundamentally required for AMR/OMR service for the foreseeable future.

¹¹ A recent survey of published plans by U. S. utilities to install trial or permanent AMR and/or Distribution Automation radio-based systems in the near term by an industry association indicated a total of 27 such utilities and nearly 1.5 million meters.

do not hold Commission licenses and the Commission therefore does not possess a "notification list" from which to work.

8. SCG holds Part 94 Private Microwave licenses in the Multiple Address Service ("MAS"), operating in part in the 928-929 MHz frequency band. Such licenses are used for operation of some of SCG's distribution and customer premises measurement, monitoring, and control systems. Often these facilities are sited in rural locations, vide infra. The presence of weather profiler radars at proximate frequencies and locations could create significant operational difficulties for these licensed MAS stations also.

THE WIND PROFILER RADAR WOULD BE AN
UNRELENTING BAND OCCUPANT

9. SCG's service territory extends throughout southern California, one of the most radio emissions-congested regions of the country. All of the emissions sources described supra are in abundant operation in this region. As a consequence, the spectral "noise floor" at 900 MHz is already elevated, from both intentional and unintentional radiators. Addition of high powered wind profile radars, even in rural locations in southern California, will make a presently difficult operating environment even more difficult.

10. To a certain extent, AMR operations are not time sensitive; in many (but certainly not all) circumstances meter "reads" can be taken from 0000 to 0600 hours local time. This is a time period in which most mobile and many fixed band licensees are not operational; a lower radio noise floor results, aiding the operation of low power AMR devices. However, this will certainly not be the case with wind profiler radars, which are presumed to operate continuously.

Thus attempts at "time division multiplex" use of the band by AMR Part 15 devices may be seriously hindered.

"RURAL LOCATIONS" ARE NOT

A BUFFER FOR WIND PROFILER RADARS

11. There is, it seems to SCG, a serious error in the Commission's assumptions concerning the beneficial effects of geographical separation between potential wind profile radar operations and other communications activities in major metropolitan areas. Once again SCG must respectfully remind the Commission that operating conditions for the Private Radio Services are different in the western United States from those prevalent for equivalent stations located along the east coast. In the west there are an abundance of high mountains containing developed communications sites¹². Western licensees, having requirements to cover very large land areas, readily use such high sites. SCG is one of those licensees; it may well desire to operate AMR/OMR/MAS collection stations in these locations.

12. Furthermore, these many high mountains are located in "rural areas," but contain base stations which provide service to adjacent metropolitan locations¹³. For example Mount

¹² The "radio horizon" from a mountain of 6000 feet Above Mean Sea Level ("AMSL") elevation is in excess of 100 miles. There are literally dozens, if not hundreds, of communications sites, containing tens of thousands of base stations, atop western mountains of at least this elevation. Stations of any sort located atop such mountains truly become "wide area" systems, with the ability to transmit to and receive from several thousands of square miles of territory in the valleys below the peaks.

¹³ SCG notes that Amateur Radio Service 448 - 450 MHz western base stations (repeaters) are often co-located with Land Mobile Service base stations at these high mountain communications sites. As noted supra, SCG takes no position relative to the 449 MHz wind profiler allocation. However, SCG informs the Commission that its "geographical separation" assumption is no more valid at 449 MHz than at 915 MHz.

Lukens is a major communications site which is located in the Angeles National Forest, adjoining identified wilderness areas. However SCG (and other licensees) use Mount Lukens extensively as a location for its base stations which provide service to a wide portion of the Los Angeles metropolitan area.

A 915 MHZ WIND PROFILER RADAR

FREQUENCY ALLOCATION IS PREMATURE

13. SCG agrees with the Comments filed by the American Radio Relay League ("ARRL") on RM-8092, in which the ARRL correctly points out that CCIR standards for 900 MHz wind profile radars have not yet been adopted. Furthermore, Petitioner has not demonstrated that wind profile operations will be compatible with existing activity on the frequency band¹⁴. SCG also notes that Petitioner itself is not clear about a fact as crucial to co-channel compatibility as the occupied bandwidth of the emissions¹⁵ from its own products¹⁶. SCG is fully cognizant of the congested nature of existing operations on the 902 - 928 MHz frequency band, including the proposed creation of a Location and Monitoring Service¹⁷. Finally, SCG asserts that no body of data relating to wind profiler radar operation on a nationwide basis (as opposed to individual developmental authorizations) has yet been accumulated, even for the 449 MHz band.

¹⁴ Docket at #17

¹⁵ These emissions, presumably, are Type B wind profiler radar category, without Minimum Shift Keying phase modulation and other band width-conserving modulation techniques.

¹⁶ Docket at #5, and Footnote 7

¹⁷ Vide Docket, Footnote 28 for reference to PR Docket No. 93-61, which proposes such authorization

14. Taken collectively, these factors and omissions present powerful arguments for placing in abeyance an allocation at 902 MHz until more data are available, and very likely not to create such an allocation on the instant frequency band at all. Perhaps, if Petitioner can demonstrate a smaller occupied bandwidth, such as the 2 MHz equivalent to the proposed Type A 449 MHz stations, other spectrum between 900 and 1100 MHz different from the proposed 902 - 928 MHz and suitable for co-sharing could be identified. Until all such possibilities have been examined, SCG vigorously opposes creation of a 915 MHz allocation (of any occupied bandwidth) for wind profiler radars at this time.

SUMMARY

SCG does not oppose in principle the allocation of radio frequency spectrum for wind profiler radars. However, SCG does take strong exception to the specific proposal to create an allocation at 902 - 928 MHz for such a service. SCG notes that, in this congested frequency band, wind profile radars possess the potential to interfere with other band users, notably unlicensed, low powered Part 15 devices. Part 15 devices are a key part of SCG's future plans for development of AMR/OMR capabilities, as a means of lowering its operating costs. Similar reasoning underlies AMR/OMR plans by other U.S. utilities. SCG suggests that the proposed "rural locations" for wind profile radar sites may, in fact, not provide sufficient isolation and protection to either the radar or to band co-users in the western U.S. Finally, SCG maintains that more data concerning band-sharing compatibility and alternative frequency allocations need to be assembled and assessed prior to the proposed allocation at 902 - 928 MHz. Therefore, for the reasons contained herein, SCG strongly OPPOSES any allocation at 902 - 928 MHz at this time.

Respectfully submitted,

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